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Sustaining the Cranberry Industry

Nimindu Ambalangodage
Worcester Polytechnic Institute

John Connors
Worcester Polytechnic Institute

Michael McConnell
Worcester Polytechnic Institute

Samuel List
Worcester Polytechnic Institute

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Sustaining the Cranberry Industry

Nimindu Ambalangodage(ECE) , John Connors (AE),
Samuel List(ECE), Michael McConnell(RBE)

Advisors: Professor Geoffrey Pfeifer(PY), Professor Marja Bakermans (BBT)

Abstract

For many years, temperatures around the world have been increasing due to global warming from greenhouse gas emissions. As the temperatures in Massachusetts climb higher, accordingly, the humble cranberry is being put in danger. Like many northern fruits, cranberries require cold winters to properly mature. Higher temperatures will prevent this, eventually forcing cranberry production to move north. This would be a terrible loss for the Massachusetts economy. To prevent this we recommend farmers transfer production to modern hybrid cranberry breeds that possess higher heat tolerances.

Background

- Winter temperatures are increasing by 0.7°C per decade¹
- By 2100 it is predicted to have increased by 2.8°C ¹
- Cranberries require 1700 chilling hours, temperatures below 7°C ²
- Climate change make the chilling time harder to fill
- 94% of the money spent on a cranberry farm is spent within a 50 mile radius of the farm
- The cranberry economy is \$99.8 million of the Massachusetts economy



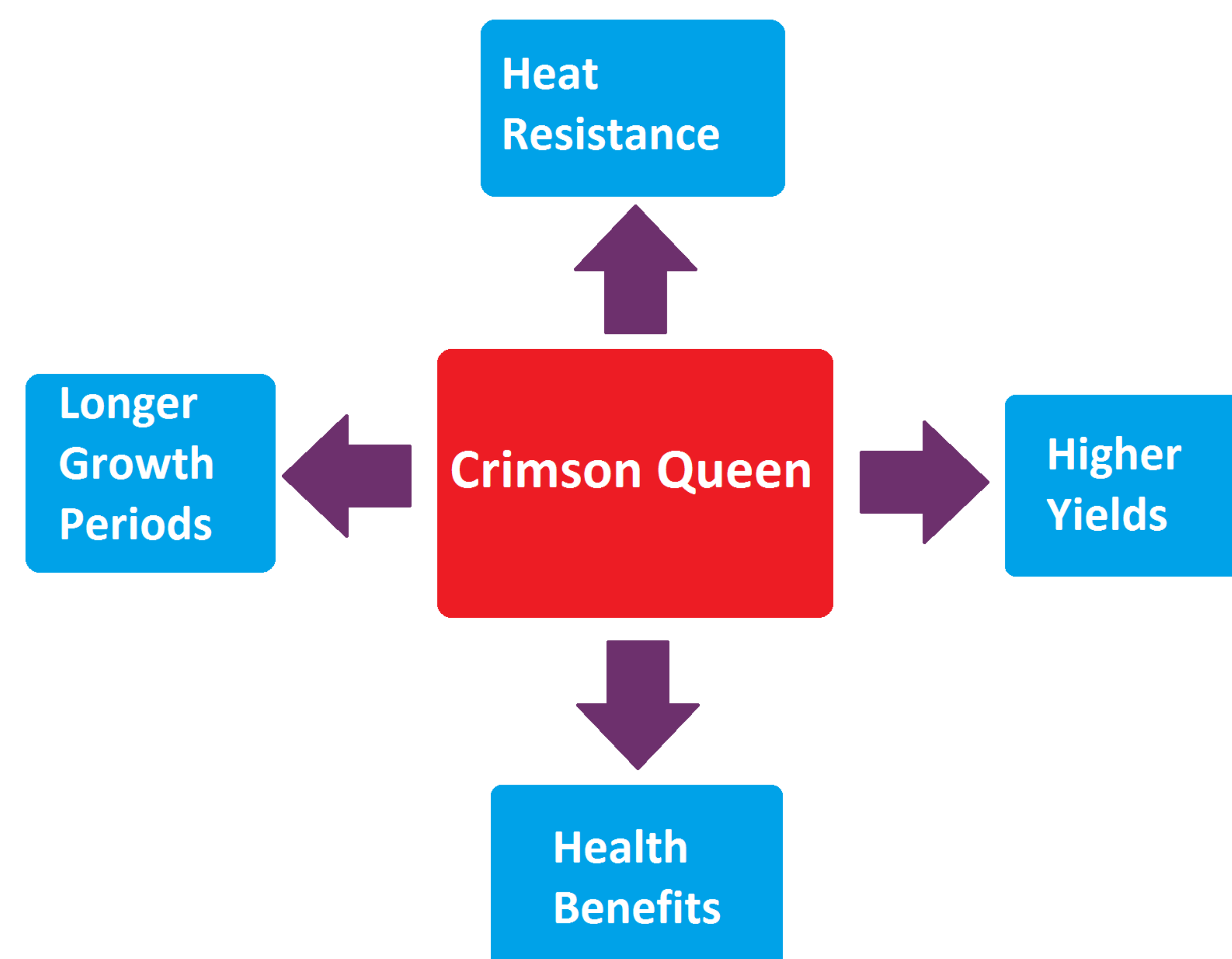
Objectives

- Research effects of climate change on cranberries
- Find viable solutions
- Minimize impact of global warming on local cranberry farms and through this protect the economies

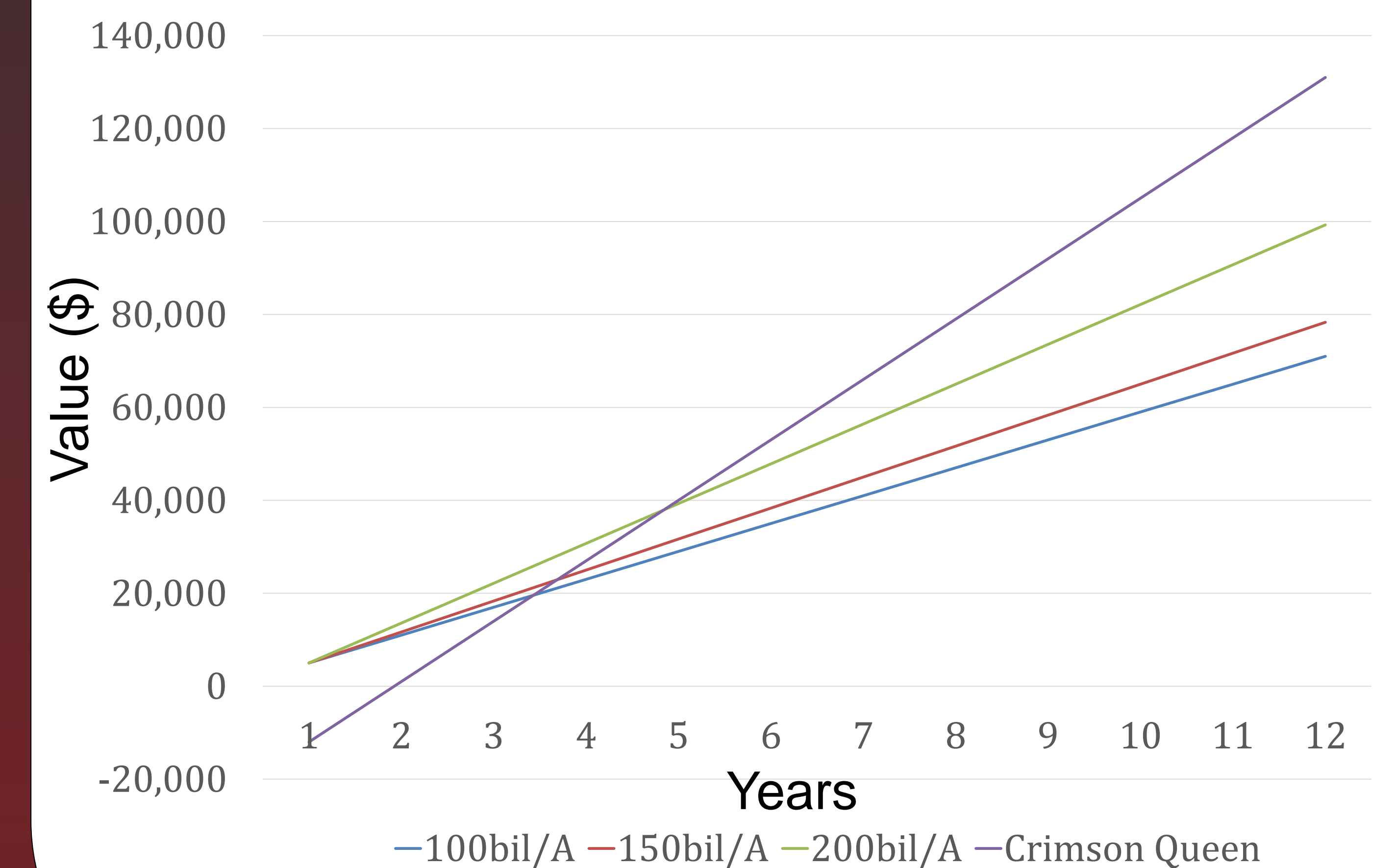
Process

- Researched online through library databases and collegiate research station websites, led us to Dr. Vorsa
- To get a professional opinion we contacted Dr. Vorsa, director of cranberry research at Rutgers University NJ. He provided us with many critical insights
- Determined the best solution: Controlled environment, crop rotation, and hybrid cranberry breeding
- Discovered hybrid cranberry, the Crimson Queen. Developed by Nicholi Vorsa
- Researched prospective farmer's attitudes towards the new brand. "What he's done is a monumental contribution to the cranberry industry," Abbott Lee, a former cranberry grower in Chatsworth, said of Vorsa. "Productivity will be much greater because of it"³

Benefits of Switch to the Crimson Queen



Projected Value of Cranberries



Reference (5)

Conclusions

Farmers are willing to change as the long term investment of Crimson Queen outweighs the short term loss.

Even though it is expensive to change farms over to using the Crimson Queen, the longer term benefit from using the Crimson Queen is far more beneficial, economically and for the climate.

Acknowledgments

Dr. Vorsa, Rebecca Ziino, Dr. Pfeifer, Dr. Bakermans

References

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